

Work Order ID 68918

Monday, April 25, 2011 1:33:09 PM



Page 1

Item ID: D6103-003

Accept



Setup Start



Revision ID:

Stop



Item Name: Round Billet, Aluminum

Start Date: 4/25/2011 Start Qty: 12.00



Cust Item ID:

Required Date: 4/29/2011 Req'd Qty: 12.00



Customer:

Reference:

Approvals:

Process Plan:

Date: 11-04-25

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D6103

Rev B

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 13976 ☐ a) Description: Alluminum round billet ☐ b)
Ø3.500" x 12.500" long ☐ c) Tolerance on all dimensions are +0.030"/-0.000"☐d) Material: 7075-T7351 (QQ-A-225/9) ☐ Material certification required

CL 11/04/28 (12)

110

0.00



Receive & Inspect for Damage & Mat'l Certs

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

CL 11/05/19 (12)

120

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

CL 11/05/19

12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RESEARCH DESIGN AND METHODS

Page 2

Accept

[REDACTED]

Setup Start

Abstract

Stop

Abstract

Cust Item ID:[illegible]

Customer:

Reference:

Run Start

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Operation Description

Set Up/ Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
QtyReject
Number

**Insp.
Stamp**

130

Identify as per dwg & Stock Location: MAT

0.00

[illegible]

Packaging

Memo

0.00

Packaging

0.00

140

QC21- Final Inspection - Work Order Release

[illegible]

QC

Memo

0.00

Quality Control

11/5/19
11-05-19
(12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

Monday, April 25, 2011 1:33:16 PM

Work Order ID: 68918



Parent Item: D6103-003



Parent Item Name: Round Billet, Aluminum



Start Date: 4/25/2011

Required Date: 4/29/2011

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A New Issue 06-02-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6103-003P  round alum billet		Purchased	No			110	Each	0.0000	1 	12		<i>Paid off 4/29/11</i>	<i>(12)</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

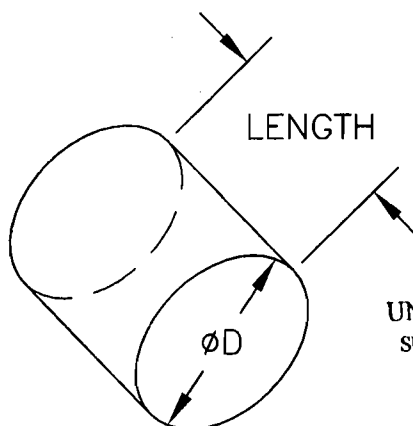
NOTE: Date & initial all entries



DESIGN D41	DRAWN BY D41	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED HHC	APPROVED HHC	DRAWING NO. D6103	Rev. B SHEET 1 OF 1
DATE 06.01.31		TITLE ROUND BILLET, ALUMINUM	SCALE NTS
A	01.04.10	NEW ISSUE	
B	06.01.31	ADD D6103-003	

SPECIFICATION CONTROL DRAWING

RELEASED
06.02.07 HHC



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 48918
PL 11-07-28

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	D (Diameter)	Length
D6103-001	7075-T6/T651 (QQ-A-200/11 OR QQ-A-225/9)	Ø3.250	12.50
D6103-003	7075-T7351 (QQ-A-225/9)	Ø3.500	12.50

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

B I L L O F L A D I N G

No: PEC 711329

Ship From:
 THYSSSENKRUPP MATERIALS NA
 2821 LANGSTAFF ROAD
 CONCORD, ONTARIO L4K 5C6
 Tel: 905 669 9444 Fax: 9057389033

Ship Date 20May11 at 15:12 From PFW
 Probill
 Via VIM TRANSFER TRUCK
 FOB CONCORD
 Frt PREPAID
 Route 0- 0 Manifest
 Vhcle Trailer
 Slp STAN IVERS (905-532-1350)
 Sold To: (20115)
 DART AEROSPACE
 1270 ABERDEEN ST
 HAWKESBURY, ON K6A 1K7

Ship To: (1)
 DART AEROSPACE
 1270 ABERDEEN ST
 HAWKESBURY, ON K6A 1K7
 Tel: 613-632-9577 Fax: 613-632-1053

B I L L O F L A D I N G

1) Our Order PEC-326920- 1 Your PO # 13976
 Part # QQ-A-225/9 \ Rel #
 ALUMINUM ROUND BAR 7075T7351
 3.50" DIA X 12.5000"

MTR'S

Heat Number	Tag No	Quantity	PCS	Wt LBS
10028398	490798	12 ' 6.0000 "	12	146

TOTAL:	Tags	PCS	LBS
	1	12	146

ADD ON TO 326915 SUR-CHARGE PAID

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR
 TO SHIPPING.

ATTN: CHANTAL/LINDA

** ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER **

** REFERENCED ON IT **

TOTAL 1 SKID GW. 171 LBS

*CUSTOMER PICK-UP HRS AT THYSSSENKRUPP MATERIALS NA
 CONCORD, ONT.* *** 9:00 AM TO 4:00 PM ***

**** TEL. 800-926-2600 ****

* WE STOCK STAINLESS STEEL *

* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT *

Page: 1Continued

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE
 RAPPORTÉES IMMÉDIATEMENT

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMÉRO D'APPROBATION SEULEMENT.
 MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

B I L L O F L A D I N G

<p>Ship From: THYSSENKRUPP MATERIALS NA 2821 LANGSTAFF ROAD CONCORD, ONTARIO L4K 5C6 Tel: 905 669 9444 Fax: 9057389033</p> <p>Ship To: (1) DART AEROSPACE 1270 ABERDEEN ST HAWKESBURY, ON K6A 1K7 Tel: 613-632-9577 Fax: 613-632-1053</p>	<p>No: PEC 711329 Ship Date 20May11 at 15:12 From PFW Probill Via VIM TRANSFER TRUCK FOB CONCORD Frt PREPAID Route 0- 0 Manifest Vhcle Trailer Slp STAN IVERS (905-532-1350) Sold To: (20115) DART AEROSPACE 1270 ABERDEEN ST HAWKESBURY, ON K6A 1K7</p>
---	--

B I L L O F L A D I N G

1) Our Order PEC-326920- 1 Your PO # 13976
 Part # QQ-A-225/9 Rel #
 ALUMINUM ROUND BAR 7075T7351
 3.50" DIA X 12.5000"

Heat Number	Tag No	Quantity	PCS	Wt LBS
10028398	490798	12 ' 6.0000 "	12	146

	Tags	PCS	LBS
TOTAL:	1	12	146

ADD ON TO 326915 SUR-CHARGE PAID

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR
 TO SHIPPING.

ATTN: CHANTAL/LINDA

** ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER **
 ** REFERENCED ON IT **

TOTAL 1 SKID GW. 171 LBS

*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA
 CONCORD, ONT.* *** 9:00 AM TO 4:00 PM ***

**** TEL. 800-926-2600 ****

* WE STOCK STAINLESS STEEL *

* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT *

Page: 1Continued

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE
 RAPPORTÉES IMMÉDIATEMENT.
 ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY
 RETOUR DE MARCHANDISES AVEC NOTRE NUMÉRO D'APPROBATION SEULEMENT.
 MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

B I L L O F L A D I N G

Ship From:
THYSSENKRUPP MATERIALS NA
2821 LANGSTAFF ROAD
CONCORD, ONTARIO L4K 5C6
Tel: 905 669 9444 Fax: 9057389033

No: PEC 711329
Ship Date 20May11 at 15:12 From PFW
Probill
Via VIM TRANSFER TRUCK
FOB CONCORD
Frt PREPAID
Route 0- 0 Manifest
Vhcle Trailer
Slp STAN IVERS (905-532-1350)
Sold To: (20115)
DART AEROSPACE

Ship To: (1)
DART AEROSPACE

B I L L O F L A D I N G

***PLEASE NOTE A \$20.00 ENERGY SURCHARGE WILL BE
ADDED TO EVERY ORDER.***

Page: 2 Last

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE
RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMÉRO D'APPROBATION SEULEMENT.
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

SHIP FROM: THYSSSENKRUPP MATERIALS NA
2821 LANGSTAFF ROAD
CONCORD, ONTARIO L4K 5C6
Tel: 905 669 9444 Fax: 9057389033

SHIP TO: (1)
DART AEROSPACE

B I L L O F L A D I N G

No: PEC 711329
Ship Date 20May11 at 15:12 From PFW
Probill
Via VIM TRANSFER TRUCK
FOB CONCORD
Frt PREPAID
Route 0- 0 Manifest
Vhcle Trailer
Slp STAN IVERS (905-532-1350)
Sold To: (20115)
DART AEROSPACE

=====

B I L L O F L A D I N G

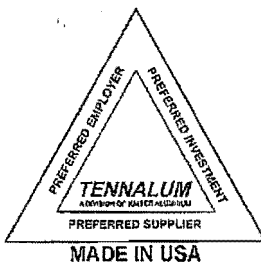
***PLEASE NOTE A \$20.00 ENERGY SURCHARGE WILL BE
ADDED TO EVERY ORDER.***

Page: 2 Last

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE
RAPPORTÉES IMMÉDIATEMENT.
ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY.
RETOUR DE MARCHANDISES AVEC NOTRE NUMÉRO D'APPROBATION SEULEMENT.
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

KAISER ALUMINUM FABRICATED PRODUCTS

Tennalum
PO Box 669
Jackson, TN 38302
731-423-2811



CERTIFIED TEST REPORT

<http://Certs.KaiserAluminum.com>

CUSTOMER PO NUMBER: 5400096705-10		CUSTOMER PART NUMBER: ALRD00373		PRODUCT DESCRIPTION: Cold Finished Round	
KAISER ORDER NUMBER: 668807	LINE ITEM: 1	SHIP DATE: 03/04/2011	ALLOY: 7075	TEMPER: T7351	
WEIGHT SHIPPED: 1123 lbs.	QUANTITY: 8 pcs.	B/L NUMBER: 32076	DIAM/DAF/THKNS: 3.500 in.	WIDTH: 0.000 in.	LENGTH: 144.0 in.
SHIP TO: Copper & Brass Sales, Inc. 13338 Orden Drive, Bldg. H Santa Fe Springs, CA 90670 USA			SOLD TO: Copper & Brass Sales Inc Attn: Accounts Payable P. O. Box 5116 Southfield, MI 48086-5116 USA		

Test Code: 1000 AC

Actual Physical Properties

Lot Number	LONG. UTS ksi	LONG. YTS ksi	LONG. ELONG. %	COND % IACS
10028398	71.8	60.1	16.0	38.8

Chemical Composition, WT. % (Aluminum Remainder)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHERS EACH	OTHERS TOTAL	Lot
Actual	0.08	0.21	1.5	0.03	2.8	0.19	6.0	0.03			10028398
Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	
Min			1.2		2.1	0.18	5.1				

Specifications

Standard: ISO 9001, ASTM B211-03, AMS 4124D, AMS-QQ-A-225/9

2/10/2011
5/12/11
RAC

CERTIFICATION

Kaiser Aluminum & Chemical Corporation ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

John Rennekamp

Plant Serial: 151522

Kaiser Order Number: 668807

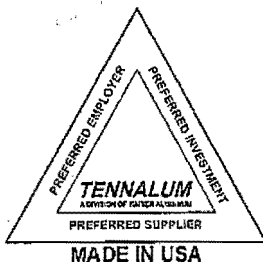
Page 1 of 2

Line Item: 1

OK 11/05/19

**KAISER
ALUMINUM
FABRICATED PRODUCTS**

Tennalum
PO Box 669
Jackson, TN 38302
731-423-2811

**CERTIFIED TEST REPORT**<http://Certs.KaiserAluminum.com>**Miscellaneous Notes**

Made in USA

This material was melted and manufactured in the USA. Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. AS9100B:2004 This material meets the requirements of (cold finished) T73 temper and QQ-A-225/9E (CANCELLED). Material is RoHS compliant.

Conf 11/05/19

CERTIFICATION

Kaiser Aluminum & Chemical Corporation ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

John Rennekamp

Plant Serial: 151522

Kaiser Order Number: 668807

Page 2 of 2

Line Item: 1

